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INNOVATIVE ASPECTS OF ENTREPRENEURSHIP EDUCATION: PREPARING A NEW GENERATION OF ENTREPRENEURS

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ABSTRACT

Innovations are a key to enterprise growth, while entrepreneurship is a key to economic growth in the country. At this point, future entrepreneurs must possess such qualities as speediness, high-performance and organization capacity. This article discusses the problem of identifying the major innovative aspects in entrepreneurship education that are essential for human resources training for modern enterprise settings, like customs business. The stuff has to be skilled in organizing and evaluating the entrepreneurship activity using new technologies and sticking. The research resulted in a list of major innovative elements of entrepreneurship education, like digital technologies, E-learning, IT, and modern mechanism of motivation.

Keywords: Entrepreneurship Education, Personnel, Digital Technologies, E-Learning, Qualifications, Competence, Educational Restructuring, Customs Business.

INTRODUCTION

In a competitive context, innovation and entrepreneurship play an important role in economic growth. In the face of economic challenges, many countries hope to obtain a competitive edge through innovation, and to revitalize the economy through encouraging entrepreneurship (Wu, 2017).

Entrepreneurship education produces a range of programs to help the students to "*connect the dots*" in a best way, thus boosting their skills of opportunity identification, of focusing on new trends and information, including new technologies and market preferences, and skills of finding patterns in those changes (Baron, 2006).

These changes that took place in the universities have recently become at the forefront and are usually discussed in terms of innovation and entrepreneurship (Kirby et al., 2011, Urbano & Guerrero, 2013). By innovation, a university means an invention, a new technology, an idea, a product, or a process that has been discovered through university research and can be in commercial use (Abreu, 2013; Wood, 2011). From this definition, the central idea is that university research has opened a door to new innovations, and some of those could have

commercial applications that ended up as businesses (Wood, 2011) providing economic and social development, and a solid ground for the university that threw that into the public.

For example, a research on education and its effect on entrepreneurship, conducted in nine provinces of Spain, indicate that innovation is one of the most important activities when it comes to business competitiveness (Cruz et al., 2009). As recommended, business organizations should give entrepreneurship education in specific fields, including new management methodologies and innovative tools, to help their firms do something new.

Other evidence that entrepreneurial success is tied, at least partially, to innovation appears in conclusions made on the basis of the South African Global Entrepreneurship Monitoring (GEM) reports (Benedict & Venter, 2010). The consequences here are the strengthening of entrepreneurial abilities of future graduates for innovation purposes (Gundry, 2014).

In customs business, innovations refer to the diffusion of an e-customs standardized solution (Raus et al., 2009).

The Russian customs system must develop into a system of customs services, and its main object must be assistance to international trade, speeding-up and simplifying the execution of customs procedures, but at the same time avoiding the worsening of performance of enforcement and fiscal functions. Assistance in foreign trade and control, must not contradict each other. This requires of graduates specific knowledge, skills and competencies in the field of e-government innovation, legal documentation and the latest technologies applied to customs (Papagiannis, 2018; Onyema & Daniil, 2017).

The question of whether innovative entrepreneurship can be taught with regard to economic significance remains open. Some argue that the entrepreneurial attitude (the ability to acquire resources, to control internal/external relations, to integrate those resources with an action plan aimed at achieving specific actions) is more a talent or something that is inherent, compared to a competence that can be acquired (Harkema & Schout, 2008). In our opinion, innovative entrepreneurship can be taught, but this depends mainly on the pedagogical approach and the learning context.

Therefore, the purpose of this research is to establish the major innovative aspects in entrepreneurship education for training qualified staff for modern enterprises like customs stations.

METHODOLOGY

When formulating the tasks of determining the required number of personnel, the methods of conceptual analysis are first used, which allow to identify the main factors, constraints and variables, and then conceptual synthesis, allow formulating the problem and fixing the criterion.

Methodological research basis includes scientific papers on sociology, economics and education. Methods applied in the research are logic analysis, system analysis.

The main research obstacle is discussed in this paper is the identification of innovative factors that need to be incorporated into entrepreneurship education.

The major idea of this article is tied to the integration of innovations and entrepreneurship with the education program. Innovative factors here are digital technologies, IT, E-learning, requirement estimation and knowledge of modern motivational mechanisms.

RESULTS

Entrepreneurship and innovations are not considered as something that falls on the shoulders of a sole entrepreneur alone; equal requirements must be met by individual employees in larger organizations. Technical aspects of entrepreneurship and innovations are not the only thing taken into account, non-technical aspects are also in the focus, like shaping of an entrepreneurial climate and entrepreneurial mentality, facilitating of trials and learning, increasing of adaptive abilities and the ability to learn, search for new ways to organize the innovation process, providing of a balance between the need for autonomy and a corporate strategy, and finding of a right exploitation-research combination.

New components of the program are aimed at developing entrepreneurial and innovation competence. Previously, competencies were defined as a combination of knowledge, problem solving skills and individual attributes. Now, competences are defined as a combination of knowledge, problem-solving skills, individual attributes and the ability to use innovation technologies. Let us consider how the above innovative factors can be integrated into the teaching and learning process.

Digital Technologies

An advanced competence is suggested to be based on accumulated professionalism and experience in using digital technologies. The digital tools used in the enterprise should not only carry out information and reference functions, but also offer an effective solution for operations in the shortest possible time. It is proposed to build competencies on the basis of accumulated professionalism based on the use of digital technologies. The digital tools used in the enterprise should not only carry out information and reference functions, but also offer an effective solution for operations in the shortest possible time. The recommended solutions should include a plan and sequence of customs operations, applying the methods and tools necessary for the competences of the staff, while the decision remains with the *"customs Manager"*.

In accordance with the vision of Europe Union, e-commerce means doing business electronically in which the parties rather than the physical exchanges or direct physical contact to interact electronically (Fasil, 2013). E-commerce is the trade without the use of paper in which electronic data interchange as a tool along with e-mail, electronic bulletin boards, electronic transmission, or other network-based technologies are used. In other words, electronic data interchange serves as the backbone of e-commerce (Nejad & Sabzikaran, 2017). So, ecommerce consists of the buying process, sale, and transfer, exchange of goods, services and information *via* computer networks including the Internet. If you have a physical store, you are limited by the geographical area that you can service. With an ecommerce website, the whole world is your playground. Additionally, the advent of ecommerce, i.e., ecommerce on mobile devices, has dissolved every remaining limitation of geography.

E-Learning

This research distinguishes four E-learning integration essentials that allow personalizing the student and setting up the company through the global web interface:

1. Instruction (concept, demonstration, seminar, reference articles, official documents, web links).
2. Collaboration (round-the-clock mentoring, expert talk, peer-to-peer talk, seminar, discussion, mentoring, discussion forum, research group, meeting).

3. Practice (software imitation, interactive exercises, role-playing imitation, quantitative modeling, web project, workshop, online lab).
4. Assessment (preliminary assessment, test effectiveness assessment, preparation for certification, individual examination).

Knowledge of Modern Motivational Mechanisms

Entrepreneurship students have to learn how to select the staff and how to estimate the requirement for it. The calculation of requirement of staff is necessary for the purpose of determining the necessity of personnel not only at present, but in future, since if the data, obtained and used during a certain period of time, does not change, we can conclude about a balanced staff and normal functioning of a modern enterprise.

To rationally use the personnel potential for continuous rotation, it is required to train and educate personnel in such a way that the personnel shifted to new posts could quickly get hold of happenings, and start independent functioning. This predetermines the implementation of the next stage of improvements in services, namely, effective motivation and continuous training, retraining, and further qualification of personnel.

Students must also know how the arousal works; know the mechanisms of motivation and self-motivation. The motivational mechanism for activation of staff must include a set of standards, targeting improvement of staff efficiency, economic and moral stimulation, grooming of internal motivation by wide publicity of all aspects of the life in customs. It is necessary to reward the staff's efforts, towards the improvement of quality of work, adoption of new methods of improvement in quality and productivity, hence, the activities, which result in the improvement of efficiency of work for the whole organization.

Developing one or the other set of means of moral and monetary stimulation it is necessary to know, which are the common factors, as per entrepreneurs, mainly affecting the quality and productivity of their work. Our research identified that the factors of improvement in efficiency and productivity of work, include:

1. Possibility of promotion.
2. High salary.
3. Just compensation of spent efforts.
4. Recognition and approval of work well done.
5. Professional growth, necessary for the execution of work.
6. Difficult and interesting work.
7. Possibility of individual out of the box approach to solutions.

The most important social element of motivational mechanism is the transparency of all aspects of entrepreneur's life, including the outcome of work. Publicity exalts honest workers, creates intolerant public opinion around the dishonest, and stimulates creative approach towards work. It is necessary to publically express recognition for the workers, whose productivity levels exceed average levels.

Considering the importance of motivation of personnel in the improvement of services at the enterprise, while developing management policies, for the effectiveness of services, it is necessary to reflect the attitude of management towards personnel. The management of services at the enterprise, department must announce about its efforts to create an atmosphere of mutual trust, respect and support, in the work place, as well as improvement in work appeal, creation of

just conditions of work, and exact assessment of each person's work in the overall performance. The working conditions must completely enable the revelation of professional potential of each worker and his creative capabilities, the management must present model behavior for the staff, and all of the management's efforts must be towards the enhancement of the department's effectiveness.

The motivational mechanism, applied to employees, can be applied as a standard for the department's functioning, the introduction of which assumes the determination of types and methods of motivation for qualitative work and professional self-improvement of personnel, as well as the procedure of their application in each individual entrepreneurial body. Such standardization is considered to be necessary, since it allows for taking into consideration the specifics of work in each individual sphere of functioning. At the same time the standard must encompass all the sub-divisions of entrepreneur authority.

The standard must state the basic provisions of the motivational mechanism, which say that high quality performance is appreciated. The standard must determine the role of departments and individual officials in the implementation of its provisions, requirements and rules. Particularly, the human resources department should be tasked to inform each of the workers, about the mechanisms of motivation applied at the department, realization and accounting of applied cases of motivation, as well as periodic analysis of effectiveness of motivational mechanism and development of proposals for its improvement. The heads of all levels should be authorized to implement the methods of motivation in accordance with their competence and authority.

When determining the goals of motivational mechanism, stages of its implementation and evaluation of expected results, it is necessary to remember that motivation is:

1. After all a supplement, however, substantial and necessary in defining HR matters, stipulated by the Laws of the Russian Federation about the service in entrepreneurial department and Disciplinary charter of entrepreneurial service.
2. Called upon to strengthen the efficiency of the system of attestation and disciplinary measures.

The set of measures of possible moral and financial stimulation, of workers, approved at a certain entrepreneurial department, must have gradation as per seniority, it is very important, from the point of view interest of personnel in future work to reduce staff turnover.

Previously, the innovation personnel policy was considered separately, not to mention the incentive systems and evaluation of the organization's efficiency and effectiveness (Modenov, 2012; Pope et al., 2014). The synergetic effect was also not taken into account which can be taken into account when evaluating the productivity and competence of the staff. For this purpose, the criteria are formulated to assess the effectiveness and efficiency, as well as parameters that regulate and adjust the organization of activities.

DISCUSSION

From the standpoint of university management, three steps should be made at the same time: close interaction with the manufacturing sphere, socio-economic development, and university re-organization (Etzkowitz, 2013; Goldstein, 2010). The latter implies new arrangements and indicators for in-class and research performance, internal organizational changes, contributive to interdisciplinarity and collaboration with the government and the industrial sector, new management methods and organizational opportunities (Goldstein, 2010).

Thus, new knowledge and related methodologies, introduced into entrepreneurship education, will boost the customs business in advance.

Ueltschy (2001) examined the in-class use of technology, compared the results with student performance, participation and enjoyment, and found out that interactive technologies have a positive effect.

E-learning is still a rare practice at the universities. At the same time, employees often limit its use when it comes to hosting and distributing information and resources, or to integrating of visual media into individual training (Gupta et al., 2004). Even though E-learning has a positive effect on performance, there are issues associated with the psychological and physical distance between teachers and students. Sometimes teachers find it difficult to detect psychological barriers that impede the motivation and attitudes of a student toward learning (Kataoka and Mertala, 2017). At this point, blended learning can be a solution maintaining a balance between face-to-face and online learning.

Some authors suggest the following directions to take when improving the mechanism of entrepreneurial authority development (Alisultanov, 2009):

1. Use of information technologies as a path to accelerating customs clearance and leveling customs regulation up.
2. Strengthening of interaction between the subdivisions of the Ministry of Internal Affairs of the Russian Federation, the Prosecutor General's Office of the Russian Federation and other agencies to intensify identification, suppression and prevention of customs offenses.
3. Professional boosting, strengthening of service discipline.
4. Building a modern customs infrastructure that enable effective customs administration.

CONCLUSION

This research resulted in innovative factors necessary for modernizing of entrepreneurship education, such as digital technologies, E-commerce, IT, requirement assessment, and knowledge of modern motivational mechanisms.

Four E-learning essentials were put forward that need to be integrated into the learning process. Modern mechanisms of motivation were outlined, which should be taught to students.

Such an integrated approach is the only path to positive results in qualified human resources training. The suggested innovations will prepare graduates for modern innovations that are being introduced in the enterprises, such as customs stations.

REFERENCES

Abreu, M., & Grinevich, V. (2013). The nature of academic entrepreneurship in the UK: widening the focus on entrepreneurial activities. *Research Policy, 42*(2), 408-422.

Alisultanov, Y. (2009). *Organizational-economic development of the control mechanism of human capacity of customs authorities*.

Baron, R.A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities. *Academy of Management Perspectives, 20*(1), 104-119

Benedict, E.A., & Venter, P.F. (2010). Education, entrepreneurial mindset and innovation: Necessary ingredients for increasing entrepreneurial activity in South Africa. *International Journal of Entrepreneurship and Innovation Management, 11*(2), 239-253.

Cruz, N.M., Escudero, A.I., Barahona, J.H., & Leitao, F.C. (2009). The effect of entrepreneurship education programmes on satisfaction with innovation behavior and performance. *Journal of European Industrial Training, 33*(3), 198-214

Etzkowitz, H. (2013). Anatomy of the entrepreneurial university. *Social Science Information, 52*(3), 486-511

Fasil, C., & Borota, T. (2013). World trade patterns and prices: The role of productivity and quality heterogeneity. *Journal of International Economics, 91*(1), 68-81.

Goldstein, H.A. (2010). *The entrepreneurial turn and regional economic development mission of universities*.

Gundry, L.K., Ofstein, L.F., & Kickul, J.R. (2014). Seeing around corners: How creativity skills in entrepreneurship education influence innovation in business. *The International Journal of Management Education, 12*(3), 529-538.

Gupta, B., White, D.A., & Walmsley, A.D. (2004). The attitudes of undergraduate students and staff to the use of electronic learning. *British Dental Journal, 196*(8), 487-492.

Harkema, S.J.M., & Schout, H. (2008). Incorporating student-centred learning in innovation and entrepreneurship education. *European Journal of Education, 43*(4), 513-526.

Kataoka, H., & Mertala, M. (2017). *The role of educators and their challenges in distance learning in New Millennium*.

Kirby, D.A., Guerrero, M., & Urbano, D. (2011). Making universities more entrepreneurial: Development of a model. *Canadian Journal of Administrative Sciences, 28*(3), 302-316.

Modenov, A.K., (2012). *System of risk management and implementation of mechanisms of reduction of risks in fulfilling customs control*. Satori in Public Safety, Gorzow Wlkp, Poznan.

Nejad, M.R.O., & Sabzikaran, E. (2017). A new model to identifying the benefits of electronic customs services on facilitate exports. *Asian Journal of Management Sciences & Education, 6*(3).

Onyema, O.G., & Daniil, P. (2017). Educating the 21st century learners: Are educators using appropriate learning models for honing skills in the mobile age? *Journal of Entrepreneurship Education, 20*(2), 1-15.

Papagiannis, G.D. (2018). Entrepreneurship education programs: The contribution of courses, seminars and competitions to entrepreneurial activity decision and to entrepreneurial spirit and mindset of young people in Greece. *Journal of Entrepreneurship Education, 21*(1), 1-21.

Pope, S., Sowiński, C., & Taelman, I. (2014). Import value de minimis level in selected economies as cause of undervaluation of imported goods. *World Customs Journal, 8*(2), 75-90.

Raus, M., Flügge, B., & Boutellier, R. (2009). Electronic customs innovation: An improvement of governmental infrastructures. *Government Information Quarterly, 26*(2), 246-256.

Ueltschy, L.C. (2001). An exploratory study of integrating interactive technology into the marketing curriculum. *Journal of Marketing Education, 23*(1), 63-72

Urbano, D., & Guerrero, M. (2013). Entrepreneurial universities: Socioeconomic impacts of academic entrepreneurship in a European region. *Economic Development Quarterly, 27*(1), 40-55.

Wood, M.S. (2011). A process model of academic entrepreneurship. *Business Horizons, 54*(2), 153-161

Wu, Y.C.J. (2017). Innovation and entrepreneurship education in Asia-Pacific. *Management Decision, 55*(7), 1330-1332.